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WWW.HZMUD.COM/25

Customer Information

Operator: Noble Energy Inc
1625 Broadway
Suite 2200
Denver, Colorado 80202

Geologist: Holly Duncan
Noble Energy Inc.

Mud Logging Details

Logger: Casey Sensecqua &
Tom Wacholz
Log Interval: 6500' MD to 11056' MD
Start Date: February 24, 2014
Release Date: February 27, 2014

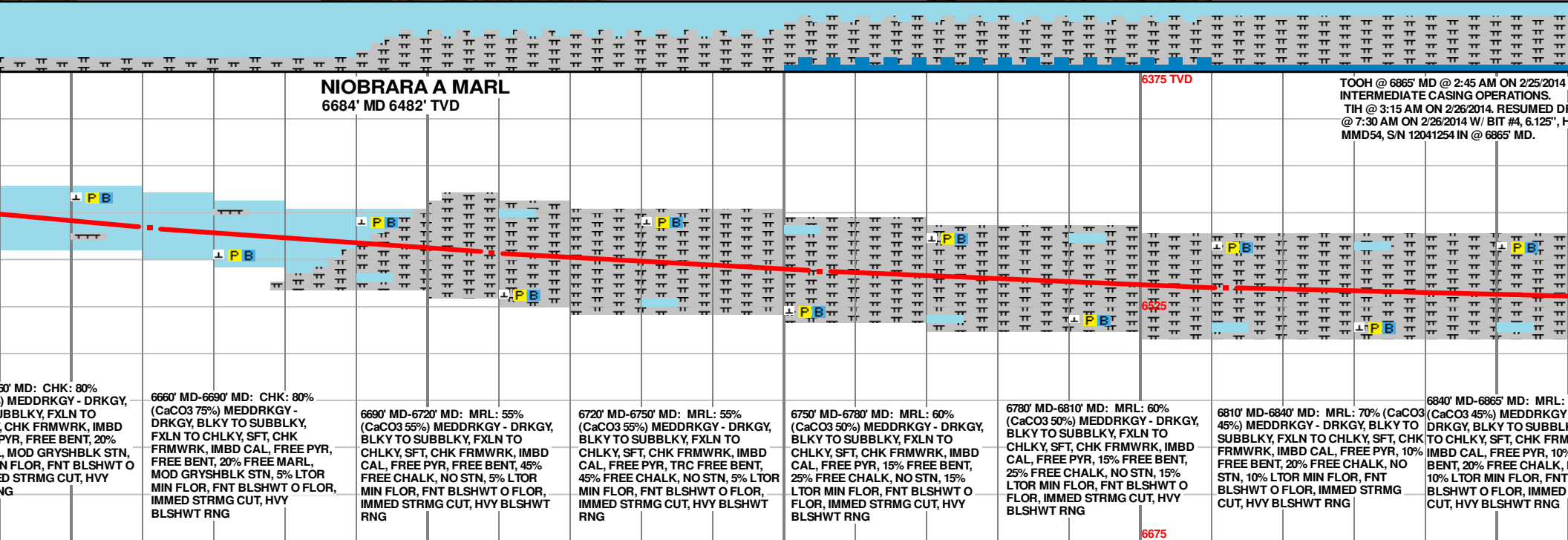
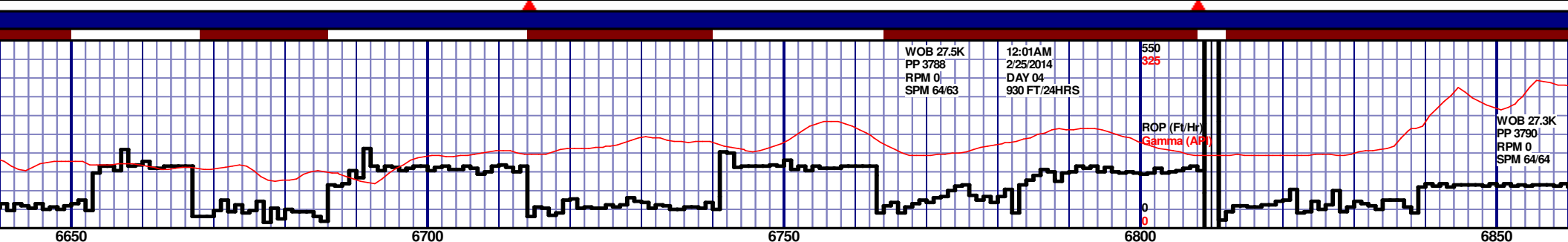
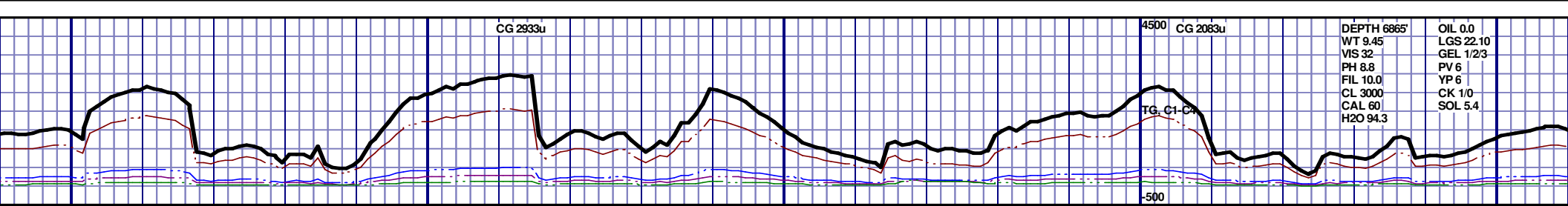
Well Information

Well Name: Wells Ranch AA35-64-1AHNA
Horizontal

Location: 36-T6N-R63W
2004' FSL, 174' FWL

County: Weld
State: Colorado

Drilling Rig: H&P 343
Total Depth: 11056' MD
TD Date: February 27, 2014
Formation: Niobrara A Marl
KB Elevation: 4797'
GR Elevation: 4773'
API Number: 05-123-38657-0000

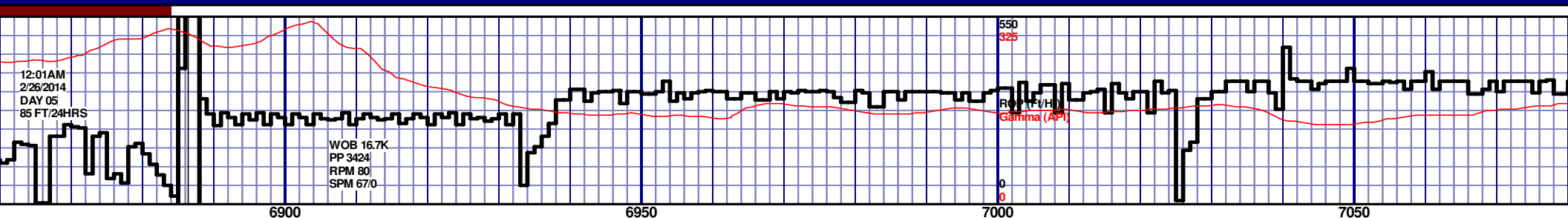


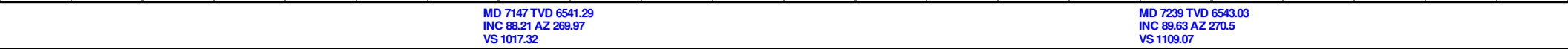
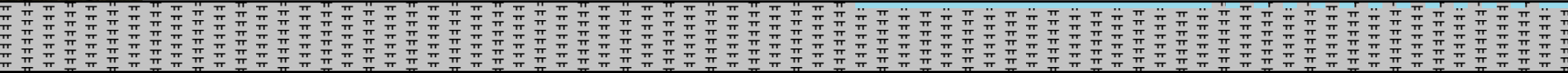
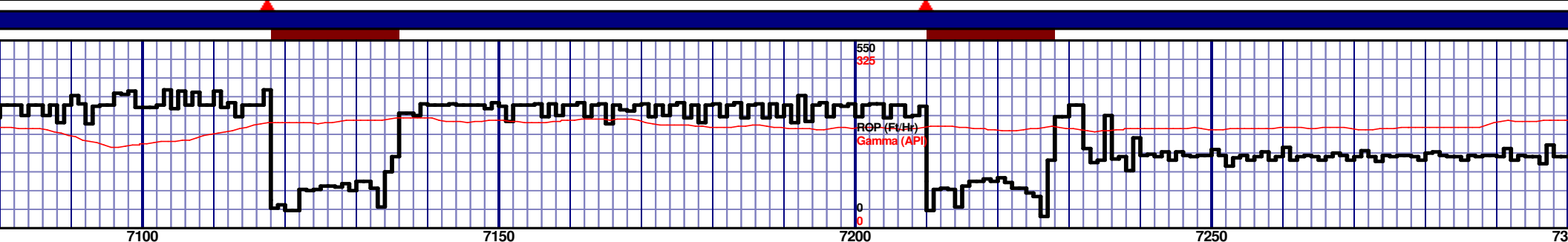
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INC 68.79 AZ 269.56
VS 539.33

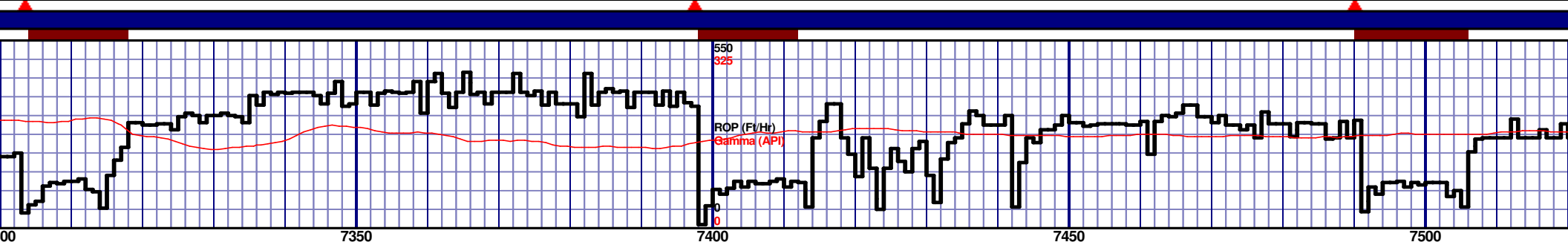
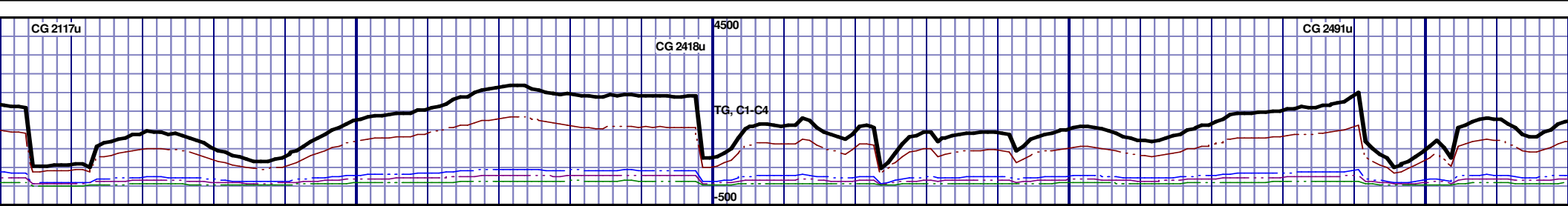
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INC 72.49 AZ 268.88
VS 584.54

MD 6755 TVD 6502.56
INC 76.75 AZ 268.66
VS 628.84

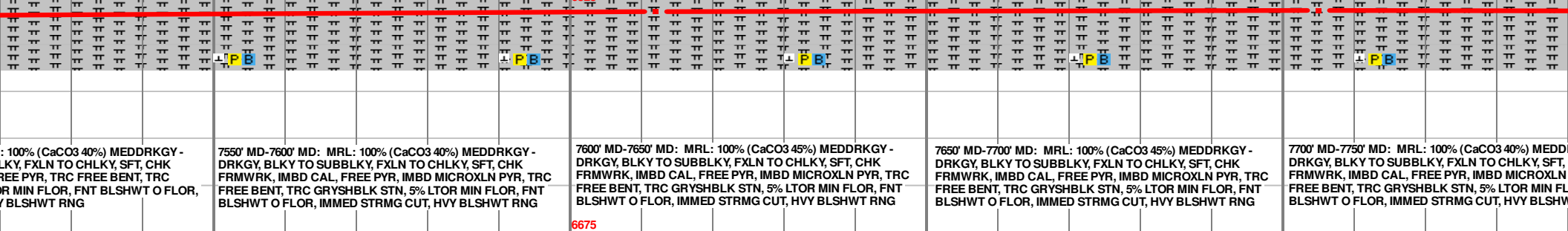
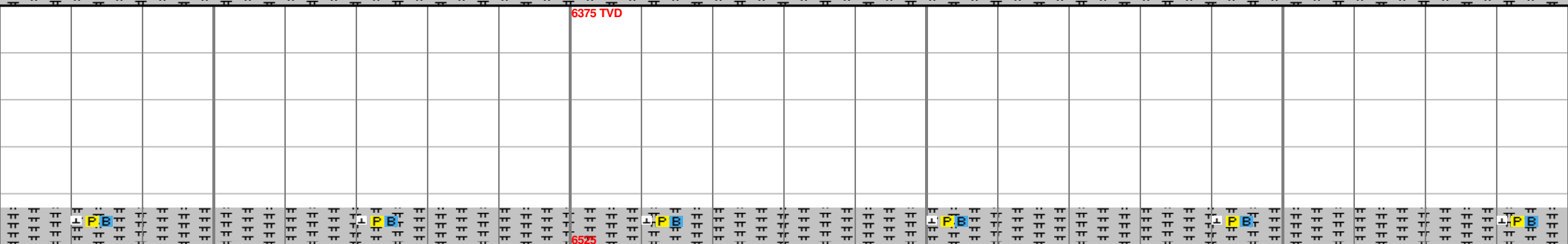
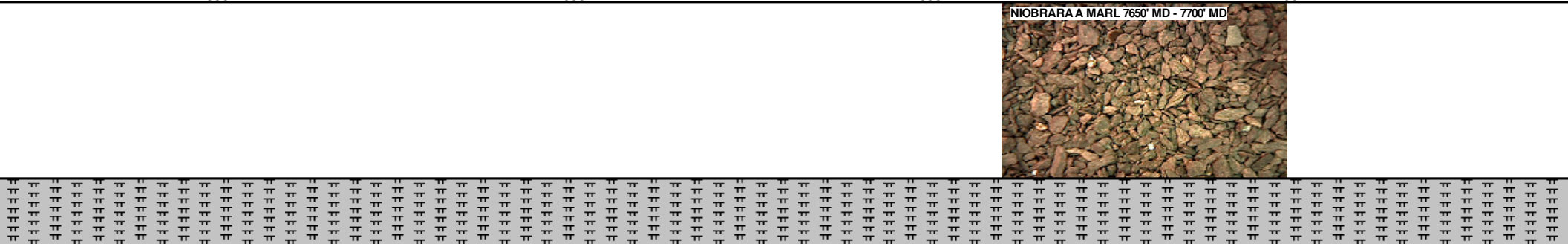
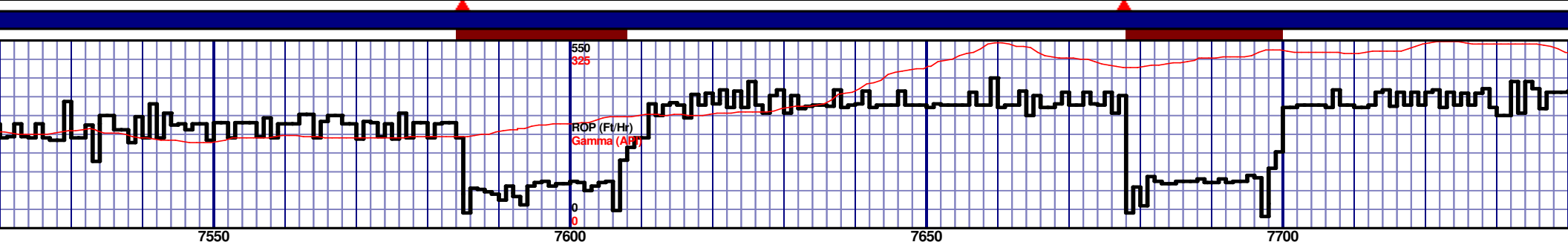
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INC 81.71 AZ 269.67
VS 684.74

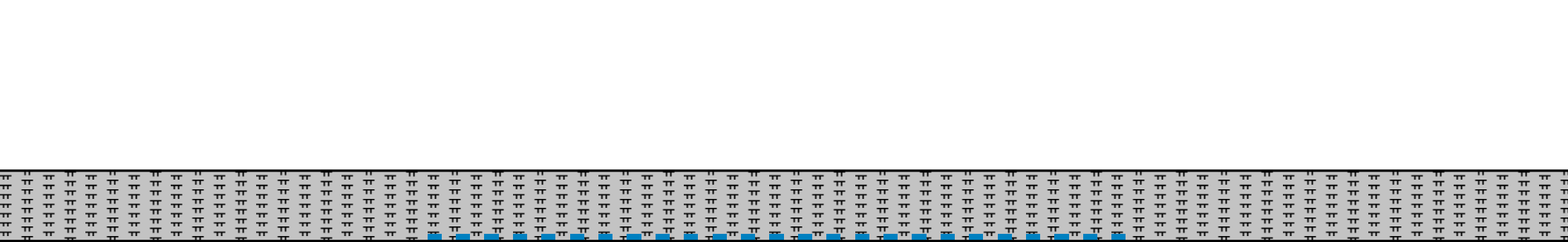
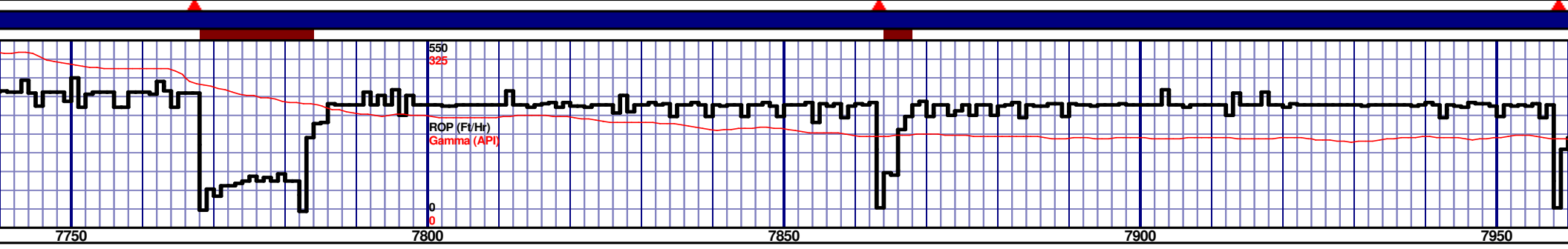
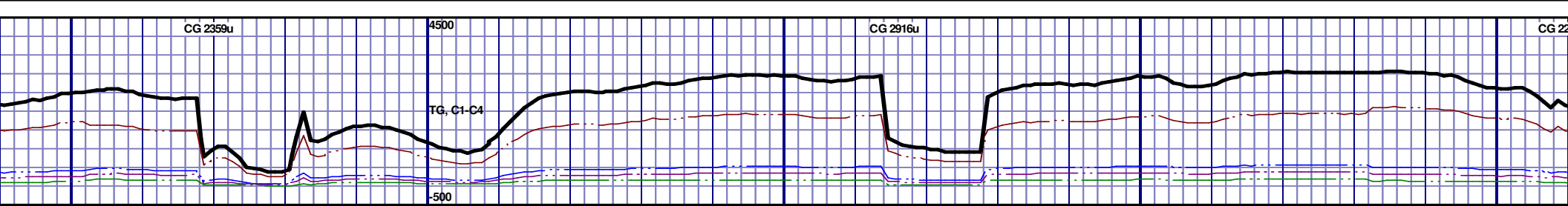
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7300' MD-7350' MD: MRL: 80% (CaCO3 45%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, 20% FREE CHALK, TRC GRYSHBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7350' MD-7400' MD: MRL: 90% (CaCO3 45%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, 10% FREE CHALK, TRC GRYSHBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7400' MD-7450' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, TRC GRYSHBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7450' MD-7500' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, TRC GRYSHBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	7500' MD-7550' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, TRC FREE BENT, TRC GRYSHBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG
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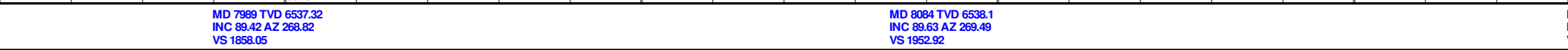
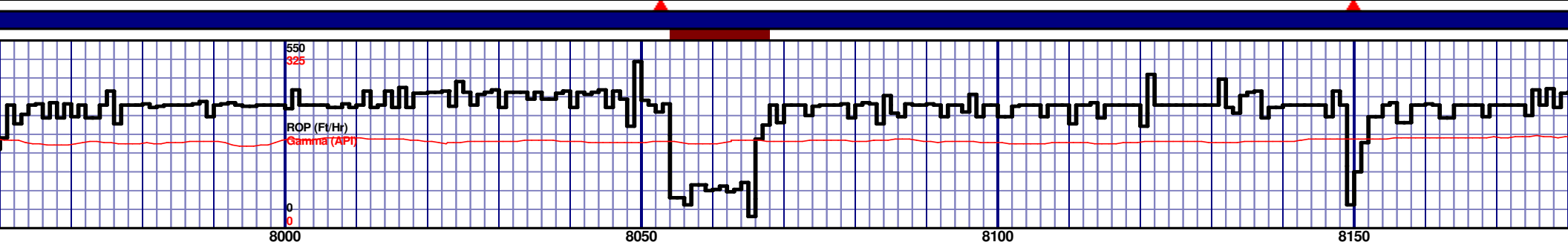


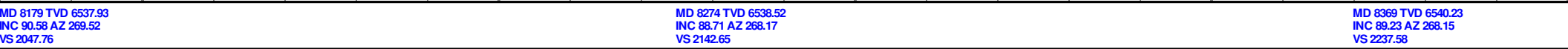
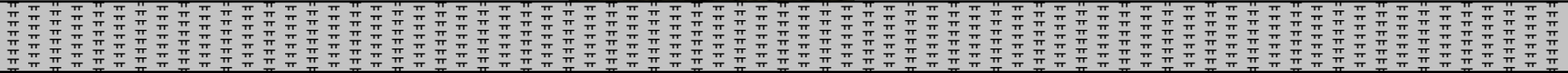
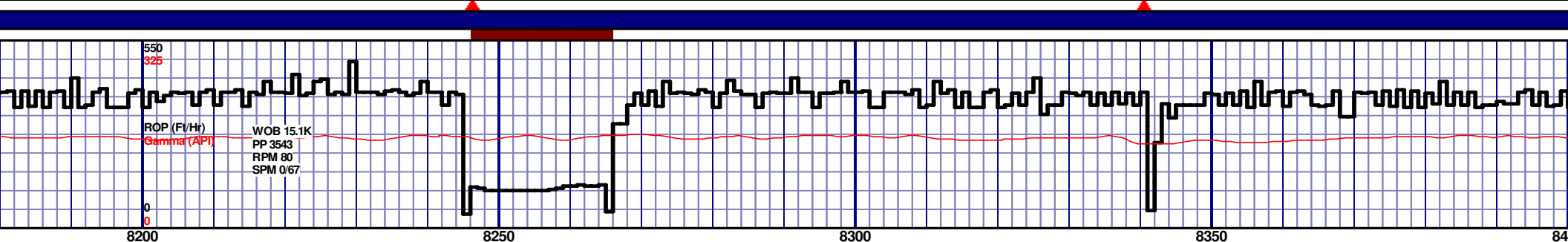


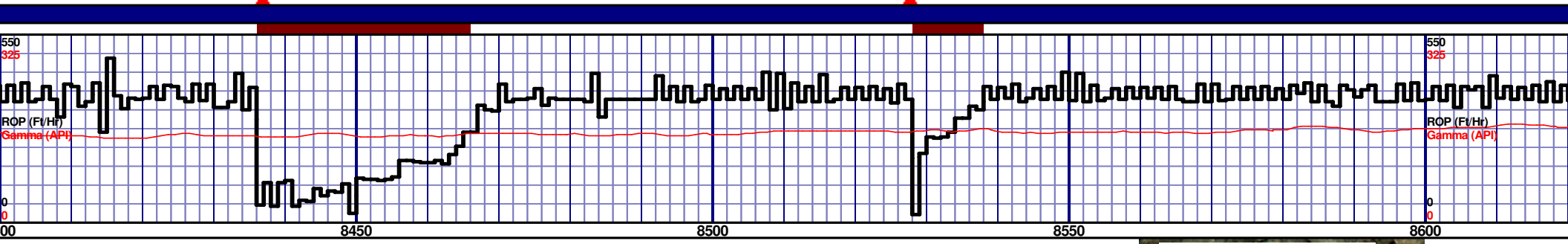
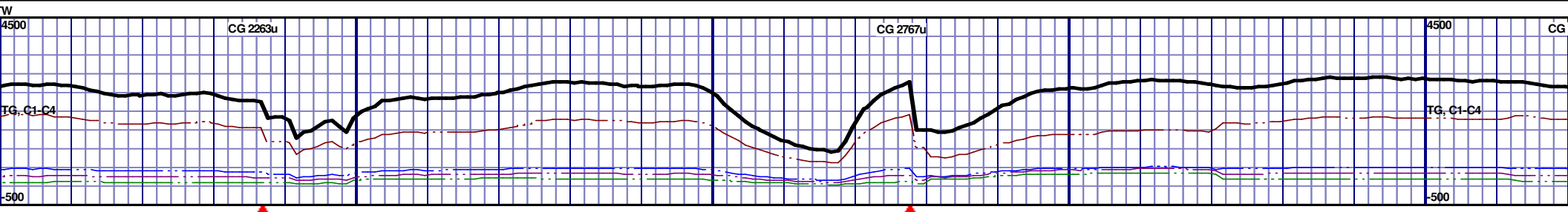
6375 TVD					6525					6675				
7750' MD-7800' MD: MRL: 100% (CaCO3 45%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWKR, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG					7800' MD-7850' MD: MRL: 95% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWKR, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, 5% FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG					7850' MD-7900' MD: MRL: 95% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWKR, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, 5% FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG				
7900' MD-7950' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWKR, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG					7950' MD-8000' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWKR, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG									

MD 7800 TVD 6534.2
INC 88.64 AZ 269.24
VS 1669.34

MD 7894 TVD 6536.07
INC 89.08 AZ 269.41
VS 1763.18







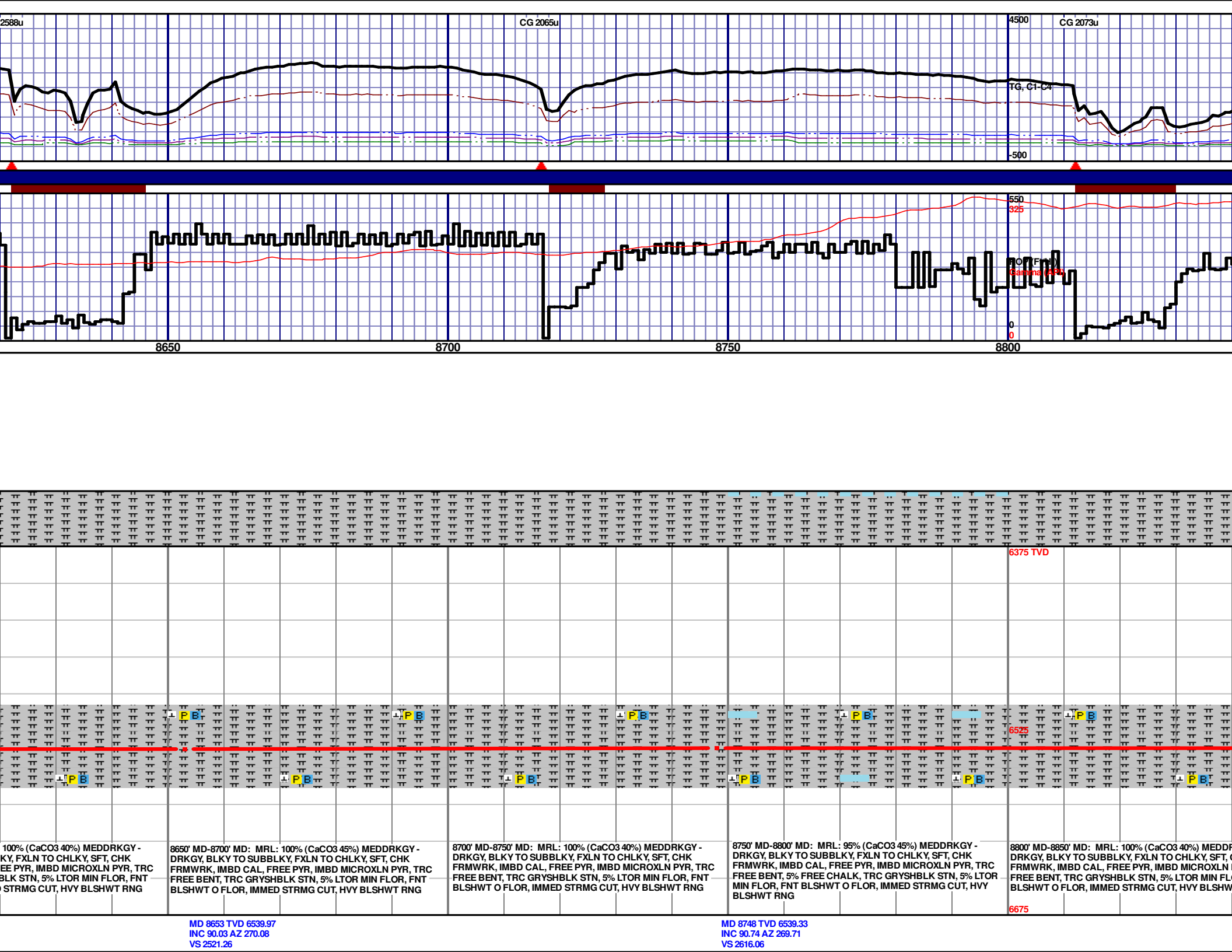
6375 TVD

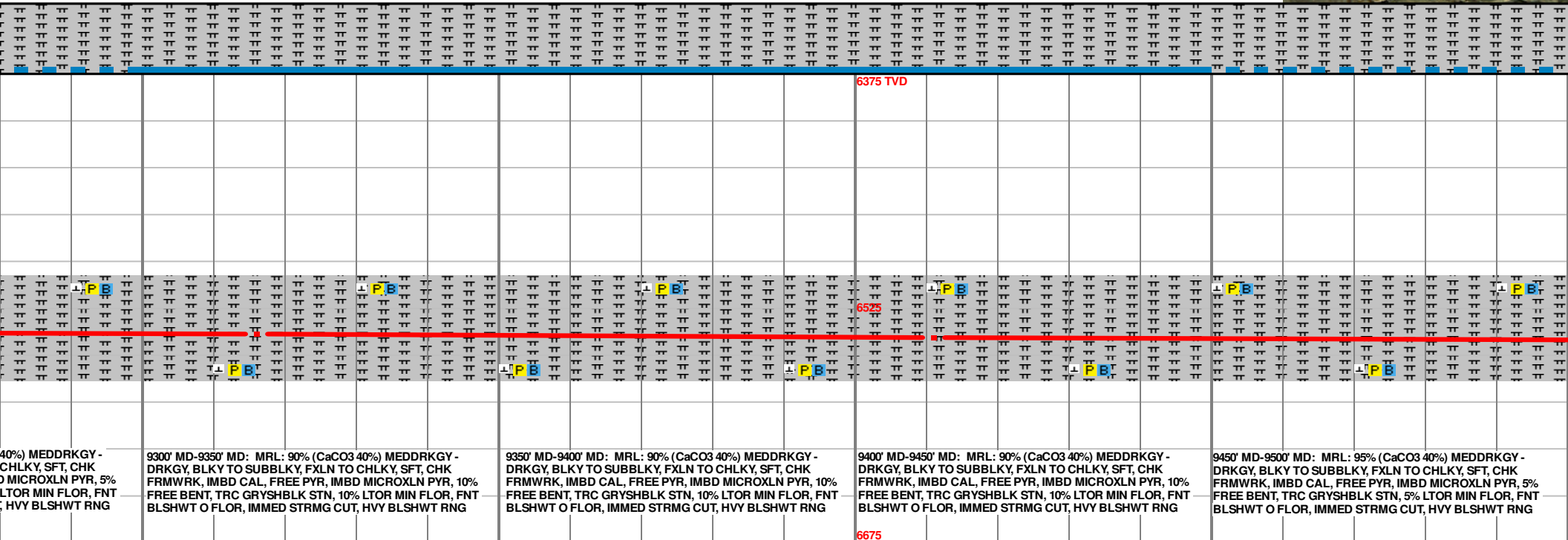
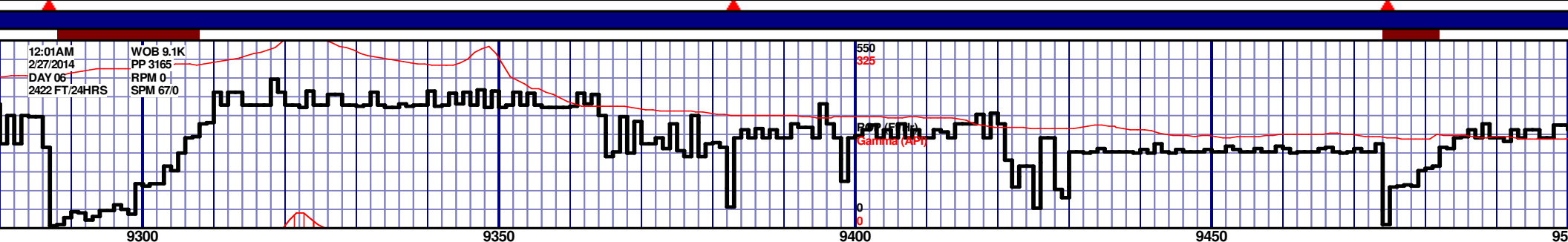
8400' MD-8450' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	8450' MD-8500' MD: MRL: 100% (CaCO3 45%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	8500' MD-8550' MD: MRL: 100% (CaCO3 45%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	8550' MD-8600' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG	8600' MD-8650' MD: MRL: 100% (CaCO3 40%) MEDDRKGY - DRKGY, BLKY TO SUBBLKY, FXLN TO CHLKY, SFT, CHK FRMWRK, IMBD CAL, FREE PYR, IMBD MICROXLN PYR, TRC FREE BENT, TRC GRYSBLK STN, 5% LTOR MIN FLOR, FNT BLSHWT O FLOR, IMMED STRMG CUT, HVY BLSHWT RNG
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6675

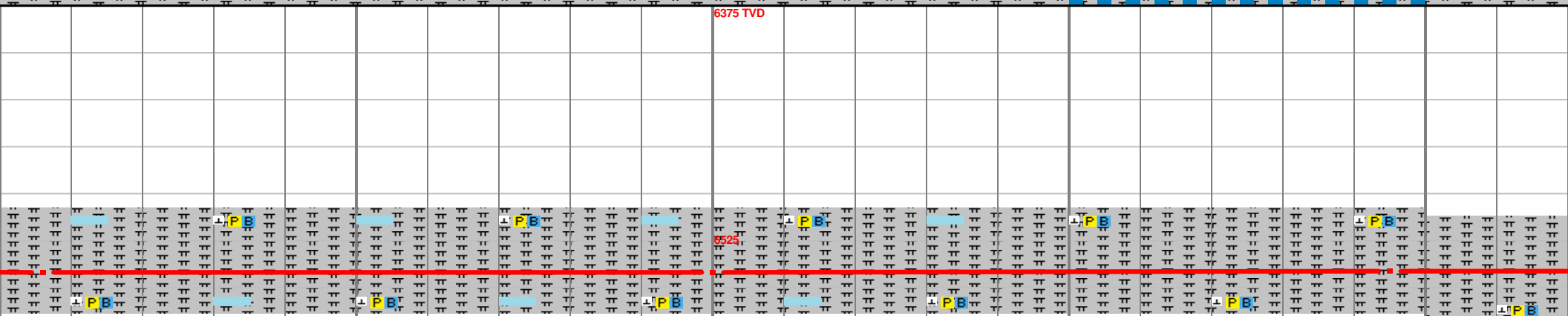
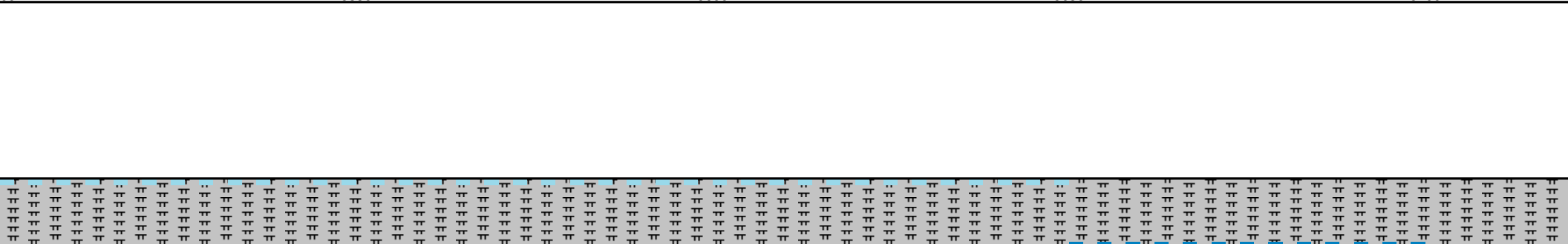
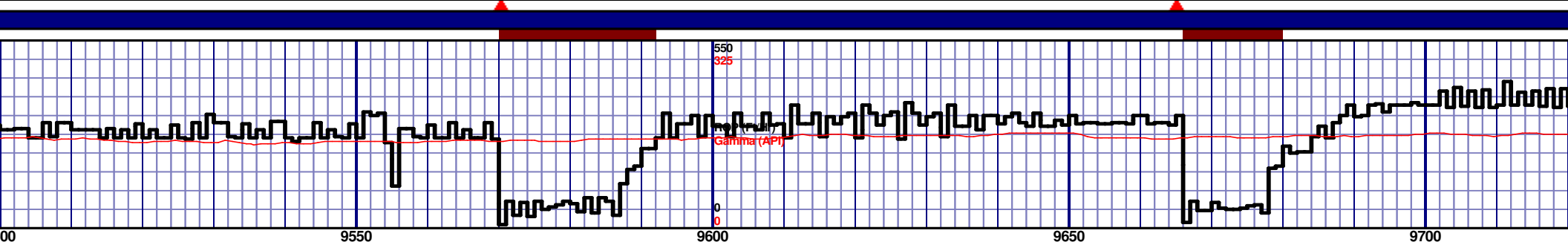
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INC 90.09 AZ 269.24
VS 2331.48

MD 8558 TVD 6540.35
INC 90.43 AZ 268.2
VS 2426.39

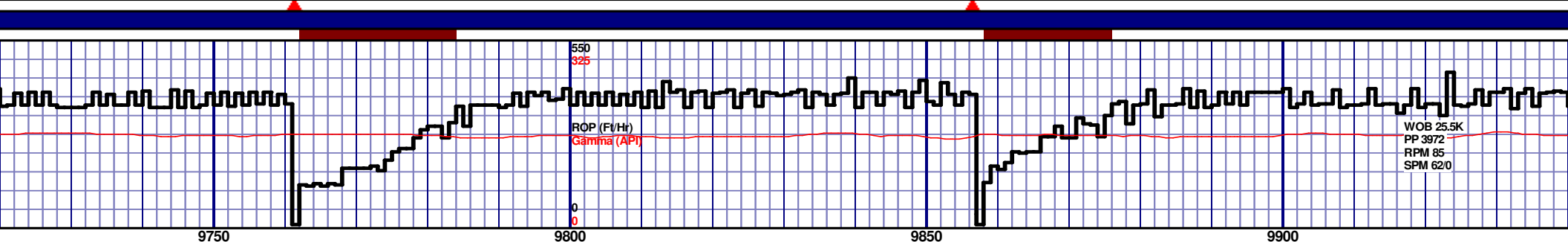


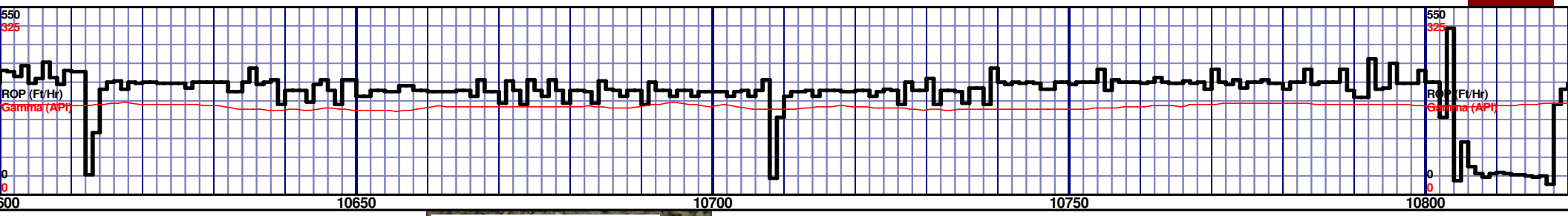


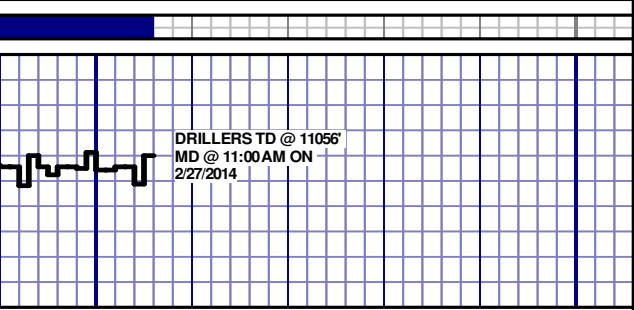
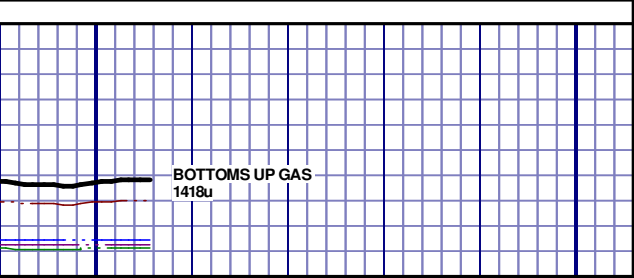
MD 9411 TVD 6543.6
INC 88.8 AZ 269.38
VS 3277.86



9700' MD-9750' MD: MRL:
DRKGY, BLKY TO SUBBL
FRMWRK, IMBD CAL, FR
FREE BENT, TRC GRYSHI
BLSHWT O FLOR. IMMED

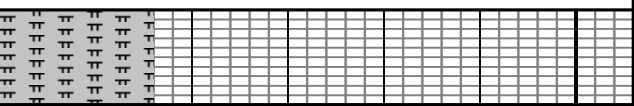
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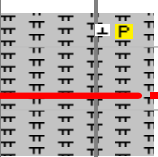
11050

11100



TD @ 11056' MD

RELEASED ON 2/27/2014



THANK YOU FROM
CASEY SENSECQUA,
TOM WACHOLZ
AND HORIZON WELL
LOGGING, LLC

DRKGY - DRKGY,
MWRK, IMBD CAL,
STN, 0% LTOR MIN
HVV BLSHWT RNG